

# Mineral Industry Surveys

#### For information, contact:

John D. Jorgenson, Iron Ore Commodity Specialist U.S. Geological Survey 989 National Center Reston, VA 20192

Telephone: (703) 648-4912, Fax: (703) 648-7757

E-mail: jjorgenson@usgs.gov

Alan Ray (Data)

Telephone: (703) 648-7938 Fax: (703) 648-7792 E-mail: aray@usgs.gov

**Internet:** http://minerals.usgs.gov/minerals

# **IRON ORE IN OCTOBER 2007**

U.S. mine production of iron ore in October 2007, on a daily average basis, was 7% greater than that for the prior month, according to the U.S. Geological Survey. Average daily production, at 156,000 metric tons (t), was 10,600 t greater than that of September 2007.

Average daily shipments in October 2007, at 166,000 t, were 4,350 t less than those of September. Mine stocks at the end of October were 309,000 t less than the revised stocks held on September 30, a 4% decrease. U.S. imports of iron ore in September 2007 were 33% greater than exports, with net imports at 273,000 t.

**Prices.**—As negotiations for contract year 2008-09 began, all indications were that prices for iron ore lump, fines, and pellets would increase substantially in the coming year following a 9.5% increase in 2007-08. It was reported that the president of Brazil's Companhia Siderúrgica Nacional considered a 50% price increase in the coming contract year as reasonable because iron ore spot prices had risen by more than this amount. BHP Billiton Limited (Australia) suggested that an iron ore index be created to facilitate annual contract price negotiations, and further suggested that BHP Billiton might resort to selling on the spot market if Asian steelmakers were not able to agree on paying a landed cost differential for Australian ores (Ho, 2007a; Metal Bulletin, 2007a, c).

While Australian iron ore miners were calling for a transportation price differential, Brazil's Companhia Vale do Rio Doce (CVRD) indicated that it had no plans to establish freight rate sharing agreements. CVRD planned to continue selling ore on a free-on-board basis (Metal Bulletin, 2007b).

**Exploration and Development.**—The Government of Western Australia approved plans for a new \$202 million berth at Port Hedland. The new export berth, with capacity of 18 million metric tons per year, was expected to begin operation at mid-year 2009. This berth capacity would serve 120,000-deadweight-ton Cape class vessels and would be used to ship chromite, iron, and manganese ores (Ho, 2007b).

Fortescue Metals Group Ltd. was upheld in a second Australian Federal Court battle with rival BHP Billiton in its attempt to gain access to the railway originally developed and funded by BHP Billiton. Although Fortescue was building a 260-kilometer railway from its Pilbara project to Port Hedland, it still needed port access for the 70 million metric tons of iron ore from its Mindy Mindy deposit (Mining Journal, 2007).

Mergers and Acquisitions.—On October 29, United States Steel Corporation announced that it had received approval for the acquisition of Canada's Stelco Inc. (See Iron Ore in August 2007.) from the Canadian Minister of Industry under the Investment Canada Act. Two days later U.S. Steel completed the acquisition of Stelco, which was renamed U.S. Steel Canada. The acquisition cost of about \$1.2 billion was financed through cash on hand, borrowings on \$900 million on term loans, and \$400 million of sales under a receivables purchase agreement (United States Steel Corporation, 2007a, b).

#### **References Cited**

Ho, Carrie, 2007a, BHP moots iron ore price index: Metal Bulletin, no. 9020, November 5, p. 34.

Ho, Carrie, 2007b, Port Hedland to add berth for iron ore juniors: Metal Bulletin, no. 9019, October 29, p. 25.

Metal Bulletin, 2007a, BHP—Sort out freight costs or we'll sell on spot: Metal Bulletin, no. 9016, October 8, p. 36.

Metal Bulletin, 2007b, CVRD has no plans to share more freight costs with clients: Metal Bulletin, no. 9016, October 8, p. 36.

Metal Bulletin, 2007c, Steinbruck says 50% iron ore price rise "reasonable": Metal Bulletin, no. 9020, November 5, p. 34.

Mining Journal, 2007, BHP loses second federal court battle: Mining Journal, October 12, p. 10.

United States Steel Corporation, 2007a, U.S. Steel obtains Investment Canada Act clearance for its acquisition of Stelco: Pittsburgh, PA, United States Steel Corporation press release, October 29, 1 p. (Accessed March 27, 2008, via http://www.ussteel.com.)

United States Steel Corporation, 2007b, United States Steel Corporation completes acquisition of Stelco Inc.: Pittsburgh, PA, United States Steel Corporation press release, October 31, 3 p. (Accessed March 27, 2008, via http://www.ussteel.com.)

TABLE 1
U.S. PRODUCTION AND SHIPMENTS OF IRON ORE<sup>1, 2</sup>
(Exclusive of ore containing 5% or more of manganese)

	Pro	Production		pments
Period	Monthly	Year to date	Monthly	Year to date
2006:				
October	4,440	45,000	4,420	42,600
November	3,920	48,900	4,430	47,000
December	3,970	52,900	4,800	51,800
2007:				
January	4,260	4,260	2,810	2,810
February	3,350	7,620	574	3,390
March	3,800	11,400	2,110	5,490
April	4,330	15,700	5,150	10,600
May	4,740	20,500	5,450	16,100
June	4,610	25,100	5,120	21,200
July	4,690	29,800	5,210	26,400
August	4,450	34,200	5,090	31,500
September	4,350	38,600	5,100	36,600
October	4,820	43,400	5,130	41,700

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits.

 $\label{eq:table 2} \textbf{U.S. PRODUCTION, SHIPMENTS, AND STOCKS OF IRON ORE IN OCTOBER}^{1,\,2}$ 

# (Thousand metric tons)

	Produ	Production		Shipments <sup>3</sup>		Stocks <sup>4</sup>	
State	2007	2006	2007	2006	2007	2006	
Michigan	1,170	1,120	1,110	1,110	3,370	2,050	
Minnesota	3,650	3,320	4,020	3,310	4,290	6,060	
Total	4,820	4,440	5,130	4,420	7,660	8,120	

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

Note: Stocks at end of September for Minnesota have been revised to 4,670 thousand metric tons.

<sup>&</sup>lt;sup>2</sup>Excludes byproduct ores.

<sup>&</sup>lt;sup>2</sup>Excludes byproduct ore.

<sup>&</sup>lt;sup>3</sup>Includes rail and vessel.

<sup>&</sup>lt;sup>4</sup>Includes usable (marketable) material at mines, concentrators, pelletizing plants, and loading docks. Excludes stocks of crude ore at mine and concentrates at agglomerating complexes.

 $\label{eq:table 3} \text{CANADA: SHIPMENTS OF IRON ORE}^{1,\,2}$ 

	Newfoundland		British	
Period	and Labrador	Quebec	Columbia	Total
2006:				
September	949	1,340	8	2,300
October	2,280	963	10	3,250
November	2,590	1,010	8	3,610
December	1,960	1,250	6	3,220
Year total	19,800	13,600	105	33,600
2007:				
January	609	616	5	1,230
February	874	571	6	1,450
March	1,030	867	8	1,910
April	1,210	1,450	5	2,660
May	1,720	1,650	8	3,380
June	1,650	1,310	7	2,960
July	2,070	1,340	7	3,420
August	2,150	1,150	6	3,310
September	1,410	1,400	6	2,820

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

Source: Natural Resources Canada.

TABLE 4 PRODUCTION OF PIG IRON AND RAW STEEL IN THE UNITED STATES, BY TYPE OF  ${\sf FURNACE}^1$ 

(Thousand metric tons)

	Pig iron	production,	Raw steel production				
	blast	furnace	Basic oxy	gen furnace <sup>2</sup>	Electric furnace		
Period	Monthly	Year to date	Monthly	Year to date	Monthly	Year to date	
2006:							
September	3,220	29,400	3,670	33,100	4,750	43,000	
October	3,090	32,500	3,460	36,500	4,640	47,600	
November	2,780	35,300	3,080	39,600	4,330	51,900	
December	2,640	37,900	2,860	42,500	4,180	56,100	
2007:						_	
January	2,850	2,850	3,090	3,090	4,450	4,450	
February	2,610	5,450	2,940	6,040	4,690	9,140	
March	3,040	8,490	3,450	9,490	4,880	14,000	
April	3,010	11,500	3,370	12,900	4,840	18,900	
May	3,130	14,600	3,530	16,400	5,000	23,900	
June	3,120	17,800	3,470	19,900	4,770	28,600	
July	3,080	20,800	3,420	23,300	4,860	33,500	
August	3,010	23,800	3,370	26,600	4,970	38,400	
September	3,010	26,900	3,370	30,000	4,600	43,000	

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

Source: American Iron and Steel Institute.

<sup>&</sup>lt;sup>2</sup>Includes production from steel plant waste oxides.

<sup>&</sup>lt;sup>2</sup>Raw steel production figures for the basic oxygen process are usually greater than the corresponding pig iron production figures because scrap is routinely melted in the basic oxygen furnace together with the molten pig iron.

TABLE 5 U.S. EXPORTS OF IRON ORE, BY COUNTRY OF DESTINATION AND TYPE  $^{\rm l,\,2}$ 

Country of destination				2007		
and type of product	2006	1st quarter	2nd quarter	July	August	September
Algeria	340		213	138	124	70
Canada	7,610	885	2,360	719	653	536
China	100	1	286	342	212	208
Colombia		1 1	6			
Mexico	215	1	2	12	30	22
Peru			5	(3)		
Romania			87			2
Other	10	1	5	1	1	2
Total	8,270	889	2,960	1,210	1,020	839
Pellets	8,060	885	2,930	1,200	988	817
Concentrates	59	1	8	1	20	10
Briquettes	23				(3)	
Sinter	77	(3)	(3)	(3)		(3)
Direct shipping ores - coarse	6	(3)	3	(3)	(3)	1
Direct shipping ores - fines	42	3	17	8	10	10
Roasted pyrites	1	(3)	(3)		(3)	(3)
Total	8,270	889	2,960	1,210	1,020	839

<sup>&</sup>lt;sup>r</sup>Revised. -- Zero.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes agglomerates.

<sup>&</sup>lt;sup>3</sup>Less than ½ unit.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF IRON ORE, BY COUNTRY AND TYPE<sup>1, 2</sup>
(Exclusive of ore containing 20% or more manganese)

			2007			2006
	Septe	ember		Year to date		January-September
	Thousand	Value <sup>3</sup>	Thousand	Value <sup>3</sup>	Value <sup>3</sup>	Thousand
Country of origin	metric	(thousand	metric	(thousand	(dollars	metric
and type of product	tons	dollars)	tons	dollars)	per ton)	tons
Australia						8
Brazil	493	26,300	2,300	135,000	58.56	3,430
Canada	519	32,400	3,830	225,000	58.57	4,640
Chile	47	2,760	279	15,700	56.21	238
Finland			5	269	53.80	6
Greece						15
Greenland			(4)	3	197.65	
India	(4)	6	(4)	6	5,685.00	(4)
Mexico	1	30	31	1,540	49.65	11
Norway			8	365	45.63	
Peru	18	529	107	3,270	30.51	39
Sweden			94	6,800	72.31	(4)
Trinidad and Tobago						299
United Kingdom			(4)	25	213.64	(4)
Venezuela	34	1,640	34	1,640	48.35	23
Total	1,110	63,700	6,690	389,000	58.10	8,710
Concentrates	110	5,850	907	38,200	42.15	1,730
Coarse ores			119	7,530	63.28	
Fine ores	376	18,800	1,240	58,100	46.69	2,070
Pellets	625	39,100	4,400	284,000	64.58	4,900
Other agglomerates	1	30	13	316	24.31	11
Roasted pyrites	(4)	6	7	345	49.29	7
Total	1,110	63,700	6,690	389,000	58.10	8,710

<sup>--</sup> Zero.

Source: U.S. Census Bureau.

TABLE 7 U.S. IMPORTS FOR CONSUMPTION OF IRON ORE IN SEPTEMBER  $2007^{1,2}$  (Exclusive of ore containing 20% or more manganese)

-			Туре	of product			
					Briquettes		
		Coarse	Fine		and other	Roasted	
Country of origin	Concentrates	ores	ores	Pellets	agglomerates	pyrites	Total
Brazil	63		358	72			493
Canada				519			519
Chile	47						47
India						(3)	(3)
Mexico					1		1
Peru			18				18
Venezuela				34			34
Total	110		376	625	1	(3)	1,110

<sup>--</sup> Zero.

<sup>&</sup>lt;sup>1</sup>Data, with the exception of the dollars per ton column, are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes agglomerates.

<sup>&</sup>lt;sup>3</sup>Customs value. Excludes international freight and insurance charges.

<sup>&</sup>lt;sup>4</sup>Less than ½ unit.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes agglomerates.

<sup>3</sup>Less than ½ unit.

 $\label{eq:table 8} \text{U.s. IMPORTS FOR CONSUMPTION OF PELLETS}, \ \ \text{BY COUNTRY}^1$ 

		2007					
	Septe	ember		Year to date	January-September		
	Thousand	Value <sup>2</sup>	Thousand	Value <sup>2</sup>	Value <sup>2</sup>	Thousand	
Country	metric	(thousand	metric	(thousand	(dollars	metric	
of origin	tons	dollars)	tons	dollars)	per ton)	tons	
Brazil	72	4,980	1,100	75,300	68.69	1,290	
Canada	519	32,400	3,220	204,000	63.29	3,570	
Mexico			19	1,220	64.37		
Peru			9	404	44.89		
Sweden			24	1,870	77.75		
Trinidad and Tobago						15	
Venezuela	34	1,640	34	1,640	48.35	23	
Total	625	39,100	4,400	284,000	64.58	4,900	

<sup>--</sup> Zero.

Source: U.S. Census Bureau.

 $\label{eq:table 9} \textbf{U.S. IMPORTS FOR CONSUMPTION OF IRON ORE,} \\ \textbf{BY CUSTOMS DISTRICT}^{1,\,2}$ 

(Exclusive of ore containing 20% or more manganese)

(Thousand metric tons)

	September	January-September	
Customs district (code no.)	2007	2007	2006
Baltimore, MD (13)	486	2,110	3,010
Buffalo, NY (09)			(3)
Charleston, SC (16)	(3)	2	(3)
Chicago, IL (39)	92	822	1,130
Cleveland, OH (41)	362	2,160	2,200
Detroit, MI (38)		(3)	102
Houston-Galveston, TX (53)		38	50
Mobile, AL (19)		33	5
New Orleans, LA (20)	171	1,470	2,190
Nogales, AZ (26)	1	13	18
Ogdensburg, NY (07)			(3)
Philadelphia, PA (11)		5	6
Port Arthur, TX (21)		24	
Providence, RI (05)		8	
Savannah, GA (17)		(3)	
St. Louis, MO (45)			(3)
Tampa, FL (18)		13	
Total	1,110	6,690	8,710
7			

<sup>--</sup> Zero.

<sup>&</sup>lt;sup>1</sup>Data, with the exception of the dollars per ton column, are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Customs value. Excludes international freight and insurance charges.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes agglomerates.

<sup>&</sup>lt;sup>3</sup>Less than ½ unit.

TABLE 10  $\mbox{U.S. IMPORTS FOR CONSUMPTION OF PELLETS,} \\ \mbox{BY CUSTOMS DISTRICT}^{1}$ 

	September	January-Se	eptember
Customs district (code no.)	2007	2007	2006
Baltimore, MD (13)	128	879	1,230
Chicago, IL (39)	29	266	157
Cleveland, OH (41)	362	2,130	2,200
Detroit, MI (38)		(2)	102
Houston - Galveston, TX (53)		38	35
New Orleans, LA (20)	106	1,070	1,180
Port Arthur, TX (21)		24	
Total	625	4,400	4,900

<sup>--</sup> Zero.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Less than ½ unit.